

### **Table S1 Classification Criteria**

#### ***Absent Annotations***

Best e-value and % identity from annotated gene alignment

Alignment Subject from a different replicon

Alignment  $\geq 80\%$  coverage for query and subject

#### ***Genomic Artifacts***

Best e-value and % identity from align. to ORF that overlaps a real gene

Alignment Subject from a different replicon

Alignment  $\geq 80\%$  coverage for query and subject

#### ***Potentially Missing***

Best e-value and % identity from intergenic ORF alignment

Alignment Subject from a different taxonomic family (defined by NCBI)

Alignment  $\geq 80\%$  coverage for query and subject

20% margin for average coverage